

REMARKS

A. Request for Reconsideration

Applicants have carefully considered the matters raised by the Examiner in the outstanding Office Action but remain of the position that patentable subject matter is present. Applicants respectfully request reconsideration of the Examiner's position based on the Declaration of Ms. Yukako Taka and the following remarks.

B. The Invention

The present invention is directed to an ink-jet recording sheet that exhibits excellent ink absorbability, superior anti-gas discoloration effects and prevents film layer delamination.

In one of the novel aspects of the invention, the ink-receiving layer of the ink-jet recording sheet comprises a polymer containing 1,2-polybutadiene in an amount of not less than 60 weight% based on the total weight of the polymer.

C. Claim Status and Amendments

Claims 1-3 and 5-13 are presented for further prosecution. No claim amendments have been made in this amendment.

D. The Office Action

The Examiner had maintained the rejection of claims 1-3 and 5-13 as being unpatentable over Uto (US 6,616,991).

Applicants previously argued the criticality of the 60 weight% limitation of claim 1 based on Example 1 of Uto and the data shown in Table 3 at page 110 of the application. The Examiner was not persuaded by this showing, since the polymer of Example 1 of Uto contains 20 weight% 1,2-polybutadiene, while the polymer of Recording sheet 55A of Table 3 contains 85 weight% 1,2-polybutadiene. The Examiner stated that the 20/85 weight% comparison is not sufficient to demonstrate the criticality of the 60 weight% limitation of claim 1.

1. The enclosed Declaration demonstrates the criticality of the 60 weight% limitation of claim 1

Applicants have performed additional tests wherein the weight% of 1,2-polybutadiene was varied to slightly above and slightly below the claimed range. These tests are presented in the enclosed Declaration of Ms. Yukako Taka.

Ms. Taka prepared Recording sheet 1, containing the compound B-1000, in accordance with Recording sheet 1 appearing in Table 1 at page 91 of the application. As shown in Table A1 of the Declaration, the polymer B-1000 contains 85 weight% 1,2-

polybutadiene. This 85 weight% value is within the range of claim 1.

Recording sheet 2 appearing in Table 1 at page 91 of the application was also prepared. Recording sheet 2 contained the compound B-2000 with 65 weight% 1,2-polybutadiene. This 65 weight% value is slightly above the lower limit of the range of claim 1.

Recording sheet Q1 was prepared similarly to Recording sheet 1, except that B-1000 was replaced by Poly-bd R45ht. Poly-bd R45HT was employed in Example 1 of Uto and in sample 17A in Table 3 at page 111 of the application. Poly-bd R45HT contains 20 weight% 1,2-polybutadiene.

Recording sheet Q2 was prepared similarly to Recording sheet 1, except that B-1000 was replaced by E-1000-8. E-1000-8 was employed in sample 7B in Table 4 at page 126 of the application. E-1000-8 contains 58 weight% 1,2-polybutadiene, slightly below the claimed range.

Ms. Taka evaluated Recording sheets 1, 2, Q1 and Q2 for gas discoloration and delamination. The results of these evaluations are shown in Table A2 of the Declaration.

When focusing on the results shown in Table A2 for Inventive Recording sheet 2 (65 weight%) and Comparative Recording sheet Q2 (58 weight%), it can be seen that Inventive Recording sheet 2 exhibited less gas discoloration compared to

Comparative Recording sheet Q2. Also, Table A2 shows that Inventive Recording sheet 2 exhibited no delamination (A rating), while Comparative Recording sheet Q2 exhibited delamination across the entire surface of the material.

Applicants respectfully submit that Ms. Taka has demonstrated the criticality of the 60 weight% limitation of the present invention. Tables A1 and A2 of the Declaration demonstrate that Inventive Recording sheet 2, having a weight% of 1,2-polybutadiene slightly within the claims range, is notably superior to Comparative Recording sheet Q2, having a weight% of 1,2-polybutadiene slightly below the claims range. Applicants therefore believe that the Declaration provides a convincing showing of the criticality of the claims range as desired by the Examiner.

In addition to the above, Applicants also note that Table A2 of the Declaration shows that Inventive Recording sheets 1 and 2 have similar discoloration and delamination properties, while the same is true for Comparative Recording sheets Q1 and Q2. Thus, the significant aspect of the present invention is whether or not the polymer has greater or less than 60 weight% 1,2-polybutadiene. Samples falling below the claimed range exhibit poor properties, while Samples falling within the claimed range exhibit superior properties.


Applicants respectfully submit that the Declaration of Ms. Taka demonstrates the criticality of the 60 weight% limitation of claim 1. This criticality is not taught or suggested by Uto. Applicants therefore believe that the present invention is patentable over Uto.

D. Conclusion

In view of the foregoing and the enclosed, it is respectfully submitted that the application is in condition for allowance and such action is respectfully requested. Should any extensions of time or fees be necessary in order to maintain this Application in pending condition, appropriate requests are hereby made and authorization is given to debit Account # 02-2275.

Respectfully submitted,

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Encl: Executed Declaration of Yukako Taka
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